

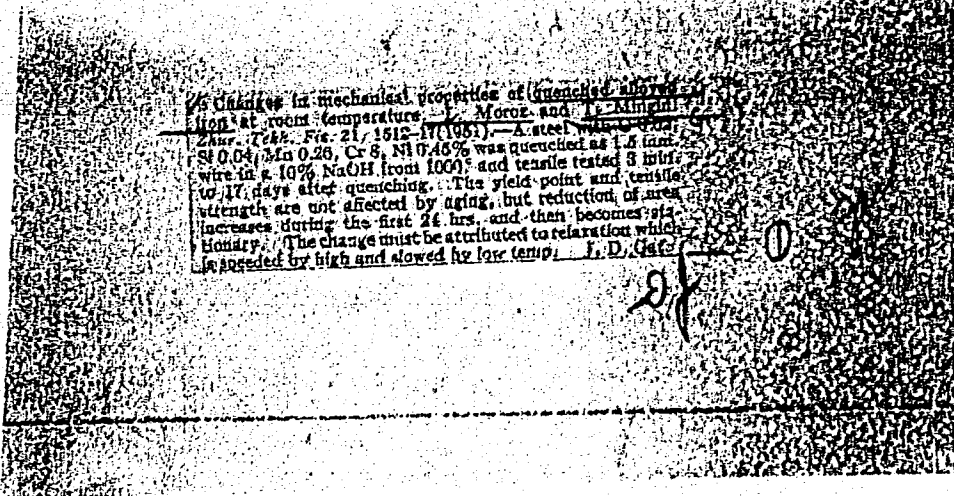
MINGAZOVA, A. V.

42726. MINGAZOVA, A. V. K Voprosu O Razviti Epteliomy Na Gummoznykh Yazvakh. Sbornik Trudy Kliniki Lozhnykh I Vener. Bolezney (Kazah. Gos. Med. In-t). Kazan', 1948, s. 136-38

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

MINGIN, T.

3



MINGIN, T.

Metallurgical Abst.  
Vol. 21 May 1954  
Structure

3  
②  
\*On Local Distortions of the Crystal Lattices of Alloys During Transformation Hardening. L. Moroz and T. Mingin (Doklady Akad. Nauk S.S.S.R., 1953, 91, (2), 249-251).—(In Russian). The ratio of the integrated X-ray intensities  $I(110)/I(220)$  were compared for quenched, annealed, and cold-worked samples of an Fe alloy contg. C 0.02, Mn 4.3, Cr 0.97%. The average values for the ratio for a number of detn. were: annealed 1.56, 20% cold-worked 2.06, and quenched 1.68. The results were interpreted as showing that the number of atoms with incoherent attachment due to distortion of the lattice was considerably less after quenching than after cold working, and that there is a substantial difference in the local distortions in transformed and cold-worked material. 9 ref. (Translated by the U.S. National Science Foundation (NSF-tr-98)).—D. M. P.

SOV/137-58-12-25354

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 181 (USSR)

AUTHORS: Moroz, L. S., Khesin, Yu. D., Mingin, T. E., Chernetsov, V. I.

TITLE: The Strength of Titanium (Prochnost' titana)

PERIODICAL: V sb.: Metallurgiya. Moscow-Leningrad, AN SSSR, 1957, pp 172-193

ABSTRACT: An investigation was made of the effect of low temperatures, rate and length of loading time, notching, and other external factors on the modulus of rupture of industrial Ti smelted in an electric-arc vacuum furnace. The authors discovered a sharp difference in sensitivity to notching (SN) in metals of separate smeltings which was determined by the ratio between the specific deformation work of impact stretching of smooth specimens and the  $a_k$  of notched Mesnager-type specimens. Ti which has a high SN is also sensitive to the state of the surface in notched specimens. The maximum H content of  $\sim 0.007 - 0.008\%$  with which Ti retains a tolerable SN, but this figure may vary depending upon O and N content. The intensity of the effect of H on the  $a_k$  is determined by the size and type of TiH precipitation which depends upon the cooling rate from the temperature of  $> 400^\circ\text{C}$ . Static

Card 1/2

The Strength of Titanium

SOV/137-58-12-25354

bending tests of notched specimens showed that the magnitude of the bending deflection and the deformation work up to the appearance of the first crack, as well as the work of propagation of the crack through the entire section of the specimen at room temperature, are less in Ti than in SKhL-4 steel. In dynamic testing Ti with 0.0007% H exhibits no cold-brittleness whatever, but when affected by impurities, in particular by H, it becomes cold-brittle. An increase in H content to 0.0125% decreases  $\psi$  by 75% at  $-196^{\circ}\text{C}$ . The authors advance a hypothesis to explain the physical nature of H-brittleness of Ti by the low  $S_{0f}$  of favorably oriented hydride inclusions. It was discovered that the strain rate has no effect on the ductility of smooth specimens of Ti enriched with H.

G. T.

Card 2/2

MOROZ, L.G., doktor tekhn.nauk; MINGIN, T.E., inzh.

Hydrogen embrittlement of steel. Metallovedenie 2:3-34 '58.  
(MIRA 13:9)

(Steel--Hydrogen content)

MINGIN T. E.

FROM I BOMB REPRODUCTION 001/712

Revalued; chemik stroy, No. 3 (Physical Metallurgy); Collection of Articles, No. 3), Leningrad, Sverdlovsk, 1970. 390 p. 3,200 copies printed.

Ed.: G. I. Myrta, Candidate of Technical Sciences; Library and Tech. Ed.: E. I. Myrmanin.

PURPOSE: This collection of articles is intended for scientific personnel at research and educational institutions and industrial plants and also for advanced students.

CONTENT: The articles report the results of investigations of 1) the effect of various factors on the susceptibility of constructional and heat-resistant steels and titanium alloys to brittle failure at various temperatures under various conditions of loading (long-time, short-time, cyclic, noncyclic) 2) alloying, structure, and condition of alloys as related to their mechanical properties, and 3) corrosion resistance and evaluation of stainless and heat-resistant steels. The articles are accompanied by numerous Soviet and non-Soviet references. No personalities are mentioned.

Editorial Board: A. S., Doctor of Technical Sciences, Professor. Nature of Steel-Brittlement Processes During Heating and the Effect of Alloying Elements on Them 5

By: M. N. B., Candidate of Technical Sciences; E. S. Sytlov, Engineer; and E. E. Kozlov, Technicians. Effect of Nickel and Copper on Thermal Brittleness of Chrom-Nickel-Titanium Constructional Steel 39

By: L. S., Doctor of Technical Sciences; and E. E. Maslov, Engineer. Mechanism of Hydrogen Embrittlement in Steel 51

By: L. A., Doctor of Technical Sciences, Professor; E. E. Kozlov, Engineer; V. P. Rodionov, Candidate of Chemical Sciences; and V. I. Buzubayev, Engineer. Change in Mechanical Properties of Certain Steels Under the Action of Hydrogen at High Temperatures and Pressures 53

By: L. S., and Yu. B. Eshkin, Engineer. Investigation of the Mechanism of Hydrogen Embrittlement of Titanium and Its Alloys 74

By: S. I., Candidate of Technical Sciences. Role of Intermediate Structures in the Heat Treatment of Medium-Alloy Constructional Steel 80

By: G. I. Gerasimov, L. M., Engineer. Stability of Structures and Properties of Tempered Steel 106

By: M. I., Candidate of Technical Sciences. Microscopic and Macroscopic Cracks in Quench-Tempered Steel 115

By: Chervakov, V. I., Engineer. Sensitivity of Titanium and Its Aluminum Alloys to Brittle Failure Under Repetitive Loading 136

By: Cherkashin, B. B., Candidate of Technical Sciences. Investigation of the Relationship Between Size of Specimen and Development of the First Fatigue Crack in Testing Steel for Mechanical Properties 153

By: Babitskiy, P. G., Doctor of Technical Sciences, Professor. Some Observations on the Strength of Metals as Related to Their Microstructure 166

By: Serebryy, S. E., Candidate of Technical Sciences. Investigation of the Initial Stages of Stress-Strain Diagrams and Relaxation of Stresses for Quench-Tempered Steel 189

MINGIN, T.E., inzh.; SHUL'KIN, S.M., kand.tekhn.nauk

Possibility of using second-grade titanium sponge.  
302 '59.

Metallurgiya 2:294-  
(MIRA 14:3)

(Titanium--Metallurgy)



S/129/62/000/004/001/010  
E111/E135

AUTHORS: Moroz, L.S., Doctor of Technical Sciences, Professor,  
and Mingin, T.E., Engineer

TITLE: Hydrogen brittleness of steel

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,  
no.4, 1962, 2-6

TEXT: Hydrogen embrittlement is generally considered to result from high local concentrations in micro-volumes where initial cracks are formed; its intensification by relatively slow plastic and elastic deformation is attributed to the acceleration of hydrogen diffusion it produces. Its disappearance at high deformation rates is attributed to the inability of diffusion to keep pace. The authors have, however, found that with sufficiently hydrogenated high-strength steel the plasticity is not fully restored by increasing deformation rates. Their experiments with Cr-Ni-Mo steel indicate that there are two simultaneous mechanisms in hydrogen embrittlement. The first, which is independent of deformation speed, produces what is provisionally termed 'irreversible' brittleness, but can often  
Card 1/3

Hydrogen brittleness of steel

S/129/62/000/004/001/010  
E111/E135

be eliminated by annealing. The second has an incubation period in which hydrogen diffusion occurs leading to local concentration sufficient to give brittleness; this type can be suppressed by deformation at rates giving deformation times less than the incubation period, and is provisionally called 'reversible'. The existence of these two mechanisms was confirmed by the difference between the change of ductility of hydrogen-saturated specimens with storage time for different deformation rates. Comparison with the behaviour of hydrogen content during storage indicates that the observed decrease in ductility (in dynamic extension) during storage is due to hydrogen redistribution, and explains various other features. Microscopic investigation showed that pores responsible for irreversible brittleness are most frequently located at grain boundaries. Their hydrogen is not fully eliminated by storage at room temperature. There is an initial rise in the dynamic ductility during storage: this is due to the fact that reversible brittleness with very high hydrogen concentrations is not fully suppressed under the particular deformation speeds used, but falls gradually.

Card 2/3

Hydrogen brittleness of steel

S/129/62/000/004/001/010  
E111/E135

The responsibility of hydrogen in pores for irreversible brittleness was confirmed by similar experiments on technical-grade iron. The authors show that stress distribution associated with pores can lead to premature cracking, while the overall resistance to plastic deformation remains as found experimentally, practically unchanged. The embrittling action of hydrogen will be greater if the pores are crack-like in shape and hence reversible brittleness produced in slow deformation of steel (with low hydrogen contents) is more pronounced than is irreversible brittleness in dynamic extension. There are 5 figures and 1 table.

Card 3/3

L 31815-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) MJW/JD

ACCESSION NR: AP5004588

S/0020/65/160/002/0311/0311

AUTHORS: Moroz, L. S.; Minqin, T. E.

TITLE: Investigation of the mechanism of hydrogen brittleness of steel

SOURCE: AN SSSR. Doklady, v. 160, no. 2, 1965, 311-313

TOPIC TAGS: steel fracture, hydrogen brittleness, hydrogen diffusion/5KtNM

ABSTRACT: Although the hydrogen brittleness of steel has been satisfactorily explained in the past, it is more difficult to explain the hydrogen brittleness of steel at low concentrations, less than 10<sup>-10</sup>. A hypothesis advanced

factorily explained in the  
hydrogen brittleness of steel at low concentrations, less than 10  
per 100 grams of metal. The authors discuss a hypothesis advanced  
to explain this phenomenon, namely that the hydrogen must become  
localized in microscopic regions in order to cause brittleness.  
Since this hypothesis implies that the limiting processes in hydrog

Card

1/3

L 31845-65

ACCESSION NR: AP5004588

0  
brittleness is the diffusion of the hydrogen in the steel, they propose to determine experimentally the activation energy of the process of retarded failure due to the hydrogen, and to compare the values obtained with the activation energy of the diffusion of hydrogen in steel. Two series of experiments were made, under different conditions, one in which failure was produced at the instant when the hydrogen entered the steel, and one when failure was produced after prolonged stay of hydrogen in the steel. The steel

duced after prolonged stay of hydrogen in the steel. The steel  
tested was 5KhNM in the form of plates measuring 3 x 10 x 80 mm.  
The heat treatments and the test procedures are described. Although  
the results did not yield a definite relation between the activation  
energy and the stress, the average activation energy obtained in the  
second type of experiment was approximately three times larger than  
that of the first type. This could be only due to the trapping of  
the hydrogen in microscopic regions and confirms the hypothesis  
stated above. This report was presented by B. P. Konstantinov.  
Orig. art. has: 2 figures and 1 table.

Card 2/3

L 31845-65

ACCESSION NR: AP5004588

ASSOCIATION: None

SUBMITTED: 03Jun64

NR REF SOV: 005

ENCL: 00

OTHER: 007

SUB CODE: MM

Card 3/3



SOPRUNOV, F.F.; MINGO PERES, E.

Tagging flies with radioactive phosphorus. Izv.AN Turk.SSR no.6:  
75-77 '55. (MLRA 9:5)

1. Turkmenskiy gosudarstvennyy meditsinskiy institut imeni I.V.  
Stalina.

(Phosphorus--Isotopes) (Flies)

MINGO-PERES, E.; SOPRUNOV, F.F.; RISKINA, L.P.

Use of radioisotopes in labeling flies [with summary in English].  
Med.paraz. i paraz.bol. 27 no.6:688-693 N-D '58. (MIRA 12:2)

1. Iz otdela krayevoy patologii AN Turkmenskoy SSR i Ashkhabad-  
skogo instituta epidemiologii i gigiyeny.

(FLIES,

labeling with radioisotopes (Rus))

(ISOTOPES,

labeling of flies (Rus))

MINGULINA, E.I., aspirant; MARTYNOVA, O.I., kand. tekhn. nauk; REZNIKOV,  
M.I., kand. tekhn. nauk

Study of the solubility of cobalt compounds in boiling water at  
185 atm pressures. Trudy MEI no.48:227-236 '63. (MIRA 17:6)

MARTYNOVA, O.I.; MINGULINA, E.I.

Calculation of pH of aqueous solutions of strong acids and bases  
at high temperatures. *Izv.vys.ucheb.zav.; khim.i khim.tekh.* 4  
no.6:1041-1042 '61. (MIRA 15:3)

1. Moskovskiy energeticheskiy institut, kafedra khimii.  
(Hydrogen-ion concentration) (Acid-base equilibrium)

L 17581-63

EWP(q)/EWT(m)/EOS AFFTC/ASD JD

ACCESSION NR: AP3005228

8/0089/63/015/002/0161/0163 58

AUTHORS: Styrikovich, M. A.; Martyanova, O. I.; Katkovskaya, K. Ya.; Dubronskiy, I. Ya.; Mingulina, E. E.

TITLE: Analysis of distribution of aluminum hydroxide between water and saturated water vapor.

SOURCE: Atomnaya energiya, v. 15, no. 2, 1963, 161-163.

TOPIC TAGS: aluminum, aluminum hydroxide, atomic electrostation.

ABSTRACT: Purity requirements for water vapor are much higher in atomic electrostations than in conventional thermal power installations. The products of corrosion may form hydroxides. The distribution of aluminum hydroxide between water and saturated water vapor at pressures 100 and 185 atm in a wide range of pH of the solution was experimentally determined in this work. The study confirmed the expectation that a considerable amount of aluminum hydroxide is transferred from water into the saturated vapor. The dependence of the true coefficient of aluminum hydroxide distribution was established. They correspond to a pH of the solution from 8 to 8.7. At higher or lower pH, the coefficient of distribution decreases sharply. Orig. art. has: 4 figures and 1 equation.

Card 1/2

VOLYNSKIY, G. (Rostov-na-Donu); MINIBAYEV, A., bortmekhanik; BALBEKOV, V.

Readers' letters. Grashd.av. 19 no.9:29 S '62. (MIRA 16:1)  
(Aeronautics, Commercial)

MINIBAYEV, G. G.

Cand Bio Sci, Diss -- "On the distribution of wild vegetation according to types of field soils and testing differentiated measures for combat it in the Tadzhik SSR". Saratov, 1961. 20 pp, 20 cm (Min of Higher and Inter Spec Educ RSFSR. Saratov Order of Labor Red Banner State University imeni N. G. Chernyshevskiy), 200 copies, No charge (KL, No 9, 1961, p 180, No 24314). [61-55865]

KUROCHKIN, V.I.; MINIBAYEV, M.M.

Effect of cortisone on the protein composition of the lymph and blood of dogs. Probl. endok. i gorm. 10 no.6:74-76 N-D '64. (MIRA 18:7)

1. Kafedra patologicheskoy fiziologii (zav. - prof. M.A.Yerzin) i tsentral'noy nauchno-issledovatel'skoy laboratorii (zav. - S.V. Senkevich) Kazanskogo meditsinskogo instituta.



MINIBAYEV, R.A.; KOLESNIKOV, L.V.; PETROVA, G.N.

Self-reversal of thermo-remanent magnetism in natural hemoilmenite  
from Kanchatka peninsula. Izv. AN SSSR. Fiz. zem. no.4:85-90 '65.  
(MIRA 18:8)

1. Institut fiziki Zemli AN SSSR.

ZHILYAYEVA, V.A.; MINIBAYEV, R.A.

Relation of the magnetic stability parameters and the magnetic viscosity coefficient to the size of the particles of ferromagnetic minerals. Izv. AN SSSR. Fiz. zem. no.4:91-96 '65.

(MIRA 18:8)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.

ACC NR: AF6021407

(N,A)

SOURCE CODE: UR/0387/66/000/006/0088/0092

AUTHOR: Minibayev, R. A.; Mikhaylova, N. P.; Petrova, G. N.ORG: Akademy of Sciences SSSR, Institute of Earth Physics (Akademiya nauk SSSR, Institut fiziki Zemli)

TITLE: Origin of magnetization of diallagous pyroxenites

SOURCE: AN SSSR. Izvestiya. Fizika zemli, no. 6, 1966, 88-92

TOPIC TAGS: magnetization, earth magnetism, geologic exploration, petrology, paleontology

ABSTRACT: This is a continuation of earlier studies of the magnetization of pyroxenites by one of the authors (Mikhaylova, Izv. AN SSSR, Ser. geofiz. no. 11, 1961). To check whether the magnetism of certain rocks is inherent and produced during the course of formation of the rock, or whether it was induced later by other means, such as chemical, the authors consider the singularities in the magnetization of pyroxenites, which are primary magmatic rocks. The pyroxenites tested were obtained from the October alkaline massif located in the southern Ukraine. The tests consisted of producing thermally-residual magnetization and ideal residual magnetization in a constant field along one edge of a cubic sample, with the earth's magnetic field cancelled out. The measurements were made at different temperatures. The tests show conclusively that the rocks became magnetized simultaneously with the occurrence of finely dispersed ferromagnetic grains in the pyroxene, and consequently the magnetiza-

Card 1/2

UDC: 550.382.3

ACC NR: AP6021407

tion is as old as the rock. This result is of importance for paleomagnetic research, since it confirms the possibility of using rocks with crystalline intrusions for paleomagnetic research, and also permits estimates of the age of crystal rocks. Orig. art. has: 3 figures and 1 table.

SUB CODE: 08/

SUBM DATE: 08Dec64/

ORIG REF: 004/

OTH REF: 001

Card 2/2

ACC NR: AP6029670

(N)

SOURCE CODE: UR/0387/66/000/008/0096/0101

AUTHOR: Minibayev, R. A. ; Myasnikov, V. S. ; Petrova, G. N.

ORG: Institute of Geophysics, Academy of Sciences SSSR (Akademiya nauk SSSR, Institut fiziki zemli).

TITLE: A case of self reversal of remanent magnetization

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 8, 1966, 96-101

TOPIC TAGS: magnetite, magnetization, magnetometer, geology

ABSTRACT: The authors discuss the results of an investigation of the magnetic properties of titanomagnetite with distinct self-reversal characteristics obtained from the Kola peninsula. Studies with a large model of the Reichert microscope revealed a distinct microstructure of the titanomagnetite. An exceptionally pronounced lattice structure was revealed with an electron microscope. The magnetic properties of the titanomagnetite determined on 10 x 10 x 10 mm samples with an astatic magnetometer are tabulated. An analysis of these data indicated that titanomagnetite can acquire reverse thermo-remanent magnetization if it is decomposed into several phases by repeated heating above the Curie point with subsequent cooling. The stability parameters of such a multiphase species exhibit anomalous features; thermo-remanent magnetization can be less stable with respect to constant and variable fields than ideal magnetization, even in a sample in which self-reversal has not yet occurred.

UDC: 550.382.3

Card 1/2

ACC NR: AP6029670

Orig. art. has: 1 table and 5 figures.

SUB CODE: 08/ SUBM DATE: 01Oct64/ ORIG REF: 001/ OTH REF: 007

Cont: 2/2

K-2

USSR/Forestry - Biology and Typology of the Forest.

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39074

Author : Minibayev, B. G.

Inst : Kazan State Ped. Institute.

Title : Contribution to the Study of Mixed Forests in the Ural  
Region of North-Western Part of Bashkiriya.

Orig Pub : Sb. srud. nauchn. rabot. Kazansk. gos. ped. in-t, Kazan',  
1957, 71-85.

Abstract : The following associations are distinguished and described  
briefly: spruce-oxalic-broad grassy silver fir forest,  
silver fir - horsetail - ostrich fern spruce forest, sil-  
ver fir - linden horsetail-oxalic spruce forest, linden-  
oxalic broad grassy spruce forest, birch - oxalic - broad  
grassy linden forest, spruce - linden gout weed - lungwort  
asper forest, gout weed - bitter vetch - oak forest.

Card 1/2

MINIBAYEV, R. G., assistant

Effective means against weeds in crops. Zashch. rast. ot vred.  
i bol. 5 no.5:31-32 My '60. (MIRA 16:1)

1. Kazanskiy pedagogicheskiy institut.

(Weed control)



MINIBAYEV, R.G.

Phytocoenotic characteristics of field weeds. Bot. zhur. 46  
no.1:135-139 Ja '61. (MIRA 14:3)

1. Kazanskiy gosudarstvennyy pedagogicheskiy institut.  
(Tatar A.S.S.R.--Weeds), (Plant communities)

JOVANOVIĆ, Vasilije; POPOVIĆ, Vukosava; MINIĆ, Božidar

Glucose titration curves in 2 cases of renal diabetes.  
Srpski arh. celok. lek. 84 no.4:468-475 Apr 56.

1. II Interna klinika Medicinskog fakulteta u Beogradu.  
Upravnik: Djordje Brkic.

(GLYCOSURIA,

renal, blood sugar titre determ. (Ser))

(BLOOD SUGAR, in various dis.

renal glycosuria, titre determ. (Ser))

MINIC, Dragan

JAT, i.e. Yugoslav Aeronautical Transport, in the tourist trade of  
Yugoslavia. Medun transp 7 no.10:955-957 0 '61.

MINIC, M.

VUČENOVIĆ (A.), PETROVIĆ (N.), MINIC (M.). Zapažanja o nekim virozama voćaka u našim rasadnicima. [Observations on some viroses of fruit trees in our nurseries.]—*Zašt. Bilja* [*Plant Prot., Beograd*], 1954, 21, pp. 42-47, 1954. [English summary.]

A survey of the virus diseases of fruit trees in Yugoslavia, carried out in 1952, indicates the danger of plum pox disease [*R.A.M.*, 33, p. 305] and to a lesser extent of fig mosaic virus [32, p. 574]. Two [unidentified] virus diseases, one characterized by greenish yellow spots and streaks and marginal necrosis on apricot leaves and the other by yellow spots and vein necrosis on apple leaves, are described briefly.

MINIC, M.

Some optimistic and pessimistic views on the future of United States. Zeleznice Jug 20 no.11:35 N '64.

MINICA, P.

Peter Mimica's new kind of seine. p. 26.  
(Gozdarski vestnik, Vol. 9, No. 1, Jan. 1957, Ljubljana, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 8, Aug 1957. Uncl.

MINIC, 1968

Joint construction of the Iron Gate system, a new contribution to  
Yugoslav and Romanian friendly cooperation. Mezin. transport. no. 111  
1968, 10, 162.

1. Vice-Chairman of the Federal Executive Council.

MINICH, D. [Minic, D.]

Air transport of Yugoslavia. Grazhd. av. 22 no. 11:30  
N '65. (MIRA 18:12)

1. Predstavitel' Yugoslavskogo aerotransporta v Moskve.



SOKOLOV, N.M.; MINICH, M.A.

Liquidus curve in the binary systems formed by molten potassium salts of fatty acids and potassium nitrite. Zbur.neorg.khim. 6 no.11:2558-2562 '61. (MIRA 14:10)

1. Smolenskiy gosudarstvennyy meditsinskiy institut, kafedra neorganicheskoy i analiticheskoy khimii.  
(Potassium salts) (Systems (Chemistry))

MINICH, V. V.

Excitation of the  $H_{01}$  wave mode in a circular waveguide from the resonator system of a magnetron. Izv. Sib. otd. AN SSSR no. 7:19-24 '60. (MIRA 13:8)

1. Institut radiofiziki i elektroniki Sibirskogo otdeleniya AN SSSR.

(Waveguides)

9.1310

S/200/62/000/005/004/005  
I010/I210

AUTHORS: Minich, V.V., Byakov, A.K., and Rogov, A.T.

TITLE: Resonance analysis of the field in a multimode waveguide

PERIODICAL: Akademiya nauk SSSR. Sibirskoye otdeleniye Izvestiya, no.5, 1962, 118-121

TEXT: A resonance method based upon the differences of the wave propagation constants is suggested for the field analysis (determination of the coefficients). The selectivity of the instrument is high, since for an increase of the  $R_x$  ratio the difference of the wavelengths for various propagation modes decreases. The highest value of the  $Q_{mnp}$  (general Q for the m,n,p mode) may be obtained by employing a semi-transparent conducting film for the coupling of the resonant cavity with the waveguide. The quality of the

Card 1/2

S/200/62/000/005/004/005  
I010/I210

Resonance analysis of the field...

semi-transparent diaphragm determines the accuracy of the measurement.  
There are 1 figure and 1 table.

ASSOCIATION: Institut radiofiziki i elektroniki Sibirsgogo otdeleniya  
AN SSSR (The Institute of Radiophysics and Electronics  
of the Siberian Division of the AS:USSR, Novosibirsk) ✓

SUBMITTED: August 19, 1961

Card 2/2

L 2974-66 EWT(1)/EWA(h) JM

ACCESSION NR: AP5022435

UR/0109/65/010/009/1692/1699

621.385.64:621.372.823 33

AUTHOR: Minich, V. V.

TITLE: Investigation of a magnetron exciting a TE<sub>01</sub> wave in a circular waveguide 35

SOURCE: Radiotekhnika i elektronika, v. 10, no. 9, 1965, 1692-1699 25

TOPIC TAGS: magnetron, circular waveguide, microwave technology

ABSTRACT: Principal design features of a high-power TE<sub>01</sub> mode magnetron with a symmetrical output structure supplying a large-diameter circular waveguide are considered. The waveguide end has radial slots for electrical connection to the magnetron anode. The system excites the mode in the waveguide if the field in the magnetron is not distorted. Stability of operation is aided by artificially creating high coupling between resonators. Experimental curves of the magnetron output, efficiency, and TE<sub>01</sub> excitation factor as functions of the cathode eccentricity show that the latter strongly affects the power and efficiency and very slightly affects the rf field. A new setup is suggested for measuring separately the mode power and the total power of all other modes in a circular multimode waveguide. Orig. art. has: 5 figures, 14 formulas, and 1 table. [03]

Card 1/1

1. 2974-66

ACCESSION NR: AP5022435

ASSOCIATION: none

SUBMITTED: 09Sep63

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 003

ATD PRESS: 4109

BVK

Card 2/2

L 37928-66

ACC NR: AP6022206

SOURCE CODE: UR/0115/66/000/005/0061/0062

AUTHOR: Minich, V. V.

ORG: none

TITLE: Measuring the power of spurious modes

SOURCE: Izmeritel'naya tekhnika, no. 5, 1966, 61-62

TOPIC TAGS: waveguide propagation, circular waveguide

ABSTRACT: Method and device are suggested for simultaneous measurement of the powers of  $TE_{0,1}$  and all other modes. The spurious-mode power is measured by a  $TE_{0,1}$ -mode filter made up from alternate metal and dielectric rings (sketch supplied). The power of all modes that have longitudinal currents is filtered out and absorbed by a water calorimeter. A waveguide with  $R/\lambda = 1.05$  capable of transmitting 13 modes was tested in the 8-mm band. Copper rings (0.5-mm thick) were separated by 0.75-mm dielectric rings ( $\epsilon = 2.5 - j0.0004$  at 10 Gc). The device permits measuring power over 300 mW with an error of  $\pm 5\%$  or less. Orig. art. has: 2 figures, 4 formulas, and 1 table. [03]

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 001 / ATD PRESS: 5047

Card 1/1

UDC: 621.372.85

MINICHENKO, S.M.

MINICHENKO, S.M.; KHVOROSTYANNIKOV, M.D.

Constructing an apartment house using combined crews of specialists.  
Bul. tekhn. inform. 3 no.10:29-31 0 '57. (MIRA 10:12)  
(Leningrad--Apartment houses)



SMORODINTSEV, A.A.; DOKUCHAYEV, G.I.; MINICHEV, P.N.; FILIPPOV, N.A.;  
CHALKINA, O.M.

Epidemiological effectiveness of live influenza vaccine during  
A2 and B influenza outbreaks in 1962. Vop. virus. 10 no.4:476-  
482 J1-Ag '65. (MIRA 18:8)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.

SMORODINTSEV, A.A.; DOKUCHAYEV, G.I.; MINICHEV, P.N.; FILIPPOV', N.A.  
CHALKINA, O.M.

Epidemiological effectiveness of live vaccine against influenza  
during the outbreak of influenza A2 and B in 1962. Zhur.  
mikrobiol., epid. i immun. 42 no.10:54-61 0 '65.

(MIRA 18:11)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.  
Submitted June 10, 1964.

MINICHEV, V. I.; SHURIS, N. A.

Coal-Mining Machinery

Coal-cutting machine GTK-35

Mekh. trud. rab. 6, No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

SHURIS, N.A.; MINICHEV, V.I.

[GTE-35m cutting machine] Vrubovaiia mashina GTE-35m. Moskva, Ugletekhnicheskii  
dat, 1953. 165 p. (MLRA 7:1)

(Coal mining machinery)

AUTHORS: Minichev, V.I., Burov, G.G., Engineers SOV-118-58-8-3/24

TITLE: "DM-1" Drainage Machine (Drenazhnaya mashina DM-1)

PERIODICAL: Mekhanizatsiya trudoyemkikh i tyazhelykh rabot, 1958, Nr 8, pp 9-11 (USSR)

ABSTRACT: The "DM-1" drainage machine was designed by the Stalinogorskiy filial Giprouglemasha (The Stalinogorsk Branch of Giprouglemash) and constructed at the Malakhovskiy eksperimental'nyy zavod (The Malakhovskiy Experimental Plant) by Engineers Latyshev, Minichev, Sinner and Burov. It was especially built for work in mucky ground or on the coal fields of the Moscow coal basin. In one shift, this machine can excavate 20-28 running m of drainage ditches, 0.5 m wide and from 0 to 1.5 m deep. Although tests proved satisfactory, they also disclosed defects in the machine: it could not excavate ditches in any given direction; its total length (8.5 m) hindered the execution of turns; the arrangement of the handles, the drum and electric motor made its operation on muddy ground difficult.

Card 1/2

"DM-1" Drainage Machine

SOV-118-58-8-3/24

Its design was revised and new experimental machines are under construction.  
There is 1 photo and 2 diagrams.

1. Mining industry--USSR
2. Earth moving equipment--Test methods
3. Earth moving equipment--Performance
4. Drainage--Equipment

Card 2/2

MINICHEV, V.M.; KASHIN, A.A.

Five-unit converter. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.-  
nauch,i tekh.inform. 16 no.7:33-34 '63. (MIRA 16:8)  
(Electric current converter)

MINICHEV, Yu.S.

Anatomy of *Anopsia gaudichaudii* (Souleyet) and the systematic position of Gymnosomata (Opisthobranchia). Zool. zhur. 42 no.9: 1317-1328 '63. (MIRA 16:12)

1. Department of Invertebrate Zoology, The State University of Leningrad.



MINICHEV, Yu.S.

Nervous system of lower Opisthobranchia (Gastropoda). Vest.  
IGU 20 no.9:13-25 '65. (MIRA 18:6)

MINIGAZIMOV, M. G.

Cand Tech Sci - (diss) "Study of the collapse of bodies of various forms in a fountain stream." Moscow, 1961. 13 pp; (State Economic Council USSR, Main Scientific Research Inst, All-Union Sci. Res. Inst of Petroleum Gas "VNII"); 150 copies; price not given; (KL, 6-61 sup, 221)

MINIGAZIEVA, T. SH.

USSR/Plant Physiology

Respiration and Metabolism

H-2

Abs Jour : Referat. Zh - Biol., No 6, 25 March 1957, 22337

Author : Usmanov, Kh. U., Minigazieva, T. Sh.

Inst : Not given

Title : Examination of carbohydrate composition of cotton boll type 1306-DV by radiochromatography.

Orig Pub : Dokl. AN UzSSR, 1956, No 3, 27-30

Abstract : An early-ripening cotton plant variety 1306-DV distinguished for its outstanding early ripening was cultivated in 1954 on the test field of the Academy of Sciences, Uzbek SSR agricultural institute. From the first day of the cotton plant's blooming  $C^{14}$  was administered through the leaves in the form of  $C^{14}O_2$ . The fiber separated from the seeds was extracted by alcohol. The extract was evaporated to dryness, dissolved in water and passed through a layer of cations and anions; then it was paper chromatographed. One of the chromatograms was developed, the position of the spots was established, and it was used as the control. The corresponding portions of the undeveloped chromatograms were cut out, and extracted by steam. The extract was evaporated, dissolved in a small quantity of water and used for radiometry on a B assembly with the

Card 1/2

-12-

USSR/Plant Physiology

Respiration and Metabolism H-2

Abs Jour : Referat Zh - Biol., No 6, 25 March 1957, 22337

aid of a special  $\beta$ -ray end counter. The content of glucose and fructose in the cotton fiber variety 1306-DV decreased with the growth of the boll, but the glucose content was always greater than the fructose content. A rapid decrease of sugar content, which is expended on cellulose synthesis, appeared in the first 10-15 days of boll-formation, i.e. earlier than in formerly tested varieties 108-F (15-25 days) and 2-I-3 (20-30days).

Card 2/2

-13-

SOV/137-57-1-710

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 91 (USSR)

AUTHORS: Minikh, R. A., Kuryachiy, I. D., Bezdol'nyy, M. G.

TITLE: Cast Iron Shavings, Supplied Into the Fusion Zone of a Cupola Furnace With the Aid of a Worm Conveyor, Are Resmelted Without Briquetting (Pereplavka chugunnoy struzhki v vagranke bez briketirovaniya s pomoshch'yu shnekovoy podachi v zonu plavleniya)

PERIODICAL: V sb.: Rats. ispol'zovaniye struzhki i dr. otkhodov chernykh i tsvet. metallov. Moscow, Mashgiz, 1956, pp 352-360

ABSTRACT: The method was applied at the "Krasnyy oktyabr" [Tr: Red October] plant in Krasnodar (1951-1953). The content of the shavings in the cupola charge amounted to 8.3%. The untreated shavings are charged into a device consisting of a hopper, mounted above the charging platform of the worm conveyor, and the drive mechanism of the latter. One side of the conveyor is connected to the hopper by means of a vertical tube, while the other side connects to the interior of the cupola furnace (CF) through an opening in the masonry. The axis of this opening is situated at a distance of 300 mm above the axis of the third, upper, row of tuyères, which ensures introduction of the

Card 1/2

SOV/137-57-1-710

Cast Iron Shavings, Supplied Into the Fusion Zone of a Cupola Furnace (cont.)

shavings into the fusion zone of the CF. The output of the device amounts to 200 kg of shavings per hour. A single CF 950 mm in diameter is serviced by two such units, each of which is powered by an electric motor rated at 4.5 kw. Introduction of shavings in an amount equivalent to 8<sup>o</sup>/o did not produce any perceptible changes in the temperature or the composition of the resulting cast iron. The hourly output of the CF's increased by 10<sup>o</sup>/o. The cost of the device described is ~2000 rubles.

Ye. E.

Card 2/2

ABLICHENKOV, I.E., Inzh.; GRACHEVA, T.A., Inzh.; MINIKS, M.V., tekhnik

Purification of the waste water of phosphorus plants. Vol. 1 san.  
tekh. no.9:1-3 S '65. (MIRA 18:9)

L 65098-65 EWT(\*)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5021968

UR/0286/65/000/014/0013/0013  
66L.63L.3.4

AUTHOR: Postnikov, N. N.; Ablichenkov, I. I.; Miniks, M. V.; Strel'tsov, A. N.;  
Bol'shakova, A. P.; Petrov, N. P.; Krasinskiy, I. Ya.

TITLE: A method for producing yellow phosphorus. Class 12, No. 172730

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 13

TOPIC TAGS: phosphorus, nonmetal element

ABSTRACT: This Author's Certificate introduces a method for producing yellow phosphorus from high-carbonate phosphorus raw material by volatilization in electric furnaces. The process is intensified by heat treating the raw material at 950-1050°C before charging the furnace.

ASSOCIATION: Nauchno-issledovatel'skiy institut po udobreniyam i insektofungisidam goskhimneftekomiteta pri Gosplane SSSR (Scientific Research Institute for Fertilizers and Insectofungicides, Goskhimneftekomitet, Gosplan SSSR); Leningradskiy gosudarstvennyy institut po proyektirovaniyu zavodov osnovnoy khimicheskoy promyshlen-

Card 1/2

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L 65098-65

ACCESSION NR: AP5021968

nosti goskhimneftekomiteta pri Gosplane SSSR (Leningrad State Institute for the  
Planning of Factories for the Fundamental Chemical Industry, Goskhimneftekomitet,  
Gosplan SSSR)

SUBMITTED: 27Jan64

ENCL: 00

SUB CODE: IG, GC

NO REF SOV: 000

OTHER: 000

*MOR*  
Card 2/2

ABSTRACTS T. J. MURPHY, N. T.

Ways to utilize the phosphorus reserves in the production of yellow phosphorus. Kilm. post. 41 no. 4131-38. Apr '65.

(MIRA 1318)

MINIMA, L. S.

Subject : USSR/Meteorology AID P - 3180  
Card 1/1 Pub. 71-a - 7/23  
Author : Minima, L. S.  
Title : The influence of moist surfaces on moisture content in air masses  
Periodical : Met. i. gidr., 5, 30-35, S/O 1955  
Abstract : The author reports on certain instances where dry air was affected by surface humidity, while the distribution of water supply in the arable soil improved. According to research, water vapors may extend up to 5 m above the surface. The corresponding humidity increase in the dry air is reported. Two maps. Five Russian references, 1949-1954.  
Institution : None  
Submitted : No date

MINIMANYAM, KH. P.

PA 36/49T107

USSR/Soil Science  
Bibliography

Jul 48

"Review of V. V. Dokuchayev's 'The Yerevan  
White Earth,'" Kh. P. Minimanyam, 3 pp

"Pochvovedeniye" No 7

Summarizes work done by V. V. Dokuchayev at the  
turn of the century on the genesis and character-  
istics of so-called Yerevan white earth. Claims  
that the white earth is of volcanic origin.

713

36/49T107

AUTHORS: Kuznetsov, Ye.V., Minimullina, L. SOV/80-32-2-53/56

TITLE: On the Synthesis of Tridimethylphenyl-n-Cresylphosphate (O sinteze tridimetilfenil-n-krezilfosfata)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 2, pp 464-465 (USSR)

ABSTRACT: The phenyl ethers of the phosphoric acid are used as plasticizers, antioxidants, insectofungicides, etc. During the synthesis of these polyphenyl derivatives of the phosphoric acid trimethylphenyl-n-cresylphosphate is formed. Magnesium chloride is a good catalyst for this process. The substance boils at 390 - 400°C at 0.1 mm mercury column. The melting point of the crystalline product is 142°C. It is soluble in tricresylphosphate, benzene, butylacetate, acetone, etc. It may be used as plasticizer for polyvinylchloride, nitrocellulose and other polymers.

Card 1/2 There are 4 Soviet references.

On the Synthesis of Tridimethylphenyl-n-Cresylphosphate SOV/80-32-2-53/56

**ASSOCIATION:** Laboratoriya kafedry tekhnologii organicheskogo sinteza Kazanskogo khimiko-tekhnologicheskogo instituta (Laboratory of the Chair of Organic Synthesis Technology of the Kazan' Chemical-Technological Institute)

**SUBMITTED:** February 3, 1958

Card 2/2

USSR/Electricity - Motors, Induction Sep 51

"Concerning G. I. Shturman's Article 'Open Squirrel Cages in Squirrel-Cages Induction Motors'," N. K. Arkhangel'skiy, A. A. Minin, K. A. Chefranov, Engineers, "Glavenergoneft"; G. V. Molchanov, Engr "Griptonaftemash"

"Elektrichestvo" No 9, pp 81, 82

The 1st group, from "Glavenergoneft," state that Shturman's method is quite unsatisfactory and cite expts conducted by Sinel'nikov and Zemlyanov in the All-Union Elec Eng Inst, in

196755

USSR/Electricity - Motors, Induction Sep 51  
(Contd)

which slotting of the end rings reduced the efficiency of the motors tested by 4.5-5% and the power factor by 17-19%, while increasing the starting torque by only 5-36%. Molchanov gives examples of successful application of Shturman's method.

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PA 196755

MININ, A. A.

AID P - 3816

Subject : USSR/Mining

Card 1/2 Pub. 78 - 4/25

Authors : Minin, A. A. and K. A. Chefranov

Title : ~~PIPELESS ELECTRIC DRILL~~  
Pipeless electric drill

Periodical : Neft. khoz., v. 33, #11, 22-31, N 1955

Abstract : The method of pipeless electric drilling is described, as well as the electric drilling unit used in it. The electric drilling unit lowered into the drilling hole consists of an electric motor which moves the drilling bit and of a centrifugal pump which circulates the drilling fluid. The drilling fluid circulates only locally around the drilling unit and the suspended removed cuttings are deposited in the drilling unit, which, therefore, must be lifted from the hole periodically and cleaned of those cuttings. This method of drilling, as compared with conventional rotary drill, has the advantages of saving time in lowering the tools in the hole, lighter



AID P - 3816

Neft. khoz., v. 33, #11, 22-31, N 1955

Card 2/2 Pub. 78 - 4/25

derrick load, and less power for operation required. Those advantages are especially prominent in greater depth drillings. Therefore, it might be suggested to divide the well drilling operation into two stages: the first, shallow drilling to be done by conventional rotary drilling, and the second, deep drilling, by pipeless electric drilling. Diagrams, tables, charts.

Institution : None

Submitted : No date

MININ, A.A.; POGARSKIY, A.A.; CHIRANOV, K.A.; SAVINA, Z.A., vedushchiy  
redaktor; KRIVENKO, V.S., tekhnicheskiy redaktor

[Boring wells without using casing; research and experience in  
industrial testing] Tekhnika bestrubnogo bureniia skvazhin;  
issledovaniia i opyt promyshlennykh ispytani. Moskva, Gos. nauchno-  
tekhn. izd-vo nefianoi i gorno-toplivnoi lit-ry, 1956. 145 p.  
(Oil well drilling) (MLRA 9:11)

MININ, A.A.; POGARSKIY, A.A.

Hydraulic drill not requiring casing. Neft. khoz. 34 no.1:26-34  
Ja '56. (MIRA 9:5)  
(Boring machinery) (Oil well drilling--Equipment and supplies)

MININ, A.A.; POGARSKIY, A.A.

Forced mechanical speed in electric drilling without drill casing.  
Neft.khes.34 no.3:14-20 Mr '56. (MIRA 9:7)  
(Oil well drilling)

MININ, A.A. ; CHEFRANOV, K.A.

Drilling installations for deep marine operations. Azerb.neft.  
khoz. 35 no.3:22-24 Mr '56. (MLRA 9:10)

(Oil well drilling, Submarine)

MININ A.A

GUSMAN, M.; MININ, A.

"Well-bottom drive for exploratory drilling" by N.G. Zhilkin.

Reviewed by M. Gusman, A. Minin. Neft. khoz. 35 no.12:66-68

D '57.

(MIRA 11:2)

(Boring machinery)  
(Zhilkin, N.G.)

Scv/93-58-7-3/17

AUTHOR: Mirza, A.A. and Pogarskiy, A.A.

TITLE: A High-speed Pipeless Electric Drill of Small Diameter (Vysokoskorotnyy besstrobnyy elektrorubir malogo diametra)

PERIODICAL: Neftyanoye khozyaystvo, 1958, Nr 7, pp. 6-13 (USSR)

ABSTRACT: Experimental data show that pipeless electric drilling is more suitable for deep drilling than the turbine method (Figs. 1-2 and Table 2) or the rotary method (Table 1 and Ref. 6). A combination method is also described employing a turbodrill for the top section of the formation and a pipeless electric drill for the bottom section. Fig. 3 shows the optimum depth for substituting a turbodrill by a pipeless drill. The ARB-208 pipeless electric drill of reversible action, described in the technical literature [Refs. 1,2,3,4,5], had a low mechanical speed and it was necessary to redesign it. Fig. 7 shows the BVE-127 high-speed pipeless electric drill which has a small diameter and is the latest design. The specifications for the ARB-208 and BVE-127 models are given in Table 4. The authors state that the new model is superior to the old one and that pipeless drilling will accelerate the rate of deep drilling in the Soviet Union. There are 8 figures, 4 tables, and 8 references, 5 of which are Soviet, 1 Czech, and 2 English.

Card 1/1 1. Drilling machines--Design

MININ, A.A.; CHEFRANOV, K.A.

Present and future use of hydrodrill percussion tools in  
industrial operations. Neft.khoz. 36 no.2:13-18 F '58.  
(MIRA 12:4)  
(Boring machinery--Hydraulic driving)



MININ, A. A., IOANNESYAN, R. A., TREBIN, F. A., GUSMAN, M. I., OSTROVSKIY, A. P.,  
TACIYEV, E. I., TITKOV, N. I., SHMAREV, A. T., GELFOAT, Y. A., and SHASHIN, V. D.

"Progress of Turbodrilling and Studying New Methods of Drilling Wells  
in the USSR."

Report submitted at the Fifth World Petroleum Congress, 30 May -  
5 June 1959. New York City.

MININ, Anatoliy Andreyevich; PETROVA, Ye.A., vedushchiy red.; MUKHINA,  
E.A., tekhn.red.

[Automatic feed of boring bits] Zaboinye avtomaty podachi dolota.  
Moskva, Gos.nauchno-tekhn.isd-vo neft. i gorno-toplivnoi lit-ry,  
1960. 110 p. (MIRA 13:12)  
(Boring machinery)

MININ, A.A.

Well bottom automatic control devices for rotary drilling.  
Ref. nos. 38 no.6:30-33 Je '60. (MIRA 13:7)  
(Oil well drilling, Equipment and supplies)  
(Automatic control)

MININ, Anatoliy Andreyevich; CHEFRANOV, Konstantin Alekseyevich; ISAYEVA,  
V.V., ved. red.; POLOSINA, A.S., tekhn. red.

[Local circulation in tapping productive horizons ] Vskrytie pro-  
duktivnykh gorizontov s mestnoi promyvkoj zaboia. Moskva, Gos.nauchno-  
tekhn. izd-vo nef. i gorno-toplivnoi lit-ry, 1961. 130 p.  
(MIRA 14:12)

(Oil well drilling)

ALEKSANDROV, A.M., inzh.; BAZHENOV, V.S., inzh.; BOBROVNIKOV, B.N., inzh.; VAGANOV, M.P., inzh.; GUREVICH, B.M., inzh.; DZHIBELLI, V.S., inzh.; DROBAKH, V.T., inzh.; ISAKOVICH, R.Ya., kand. tekhn. nauk; KAPUSTIN, A.G., inzh.; KONENKOV, K.S., inzh.; MININ, A.A., kand. tekhn. nauk; PEVZNER, V.B., inzh.; PESKIN, G.L., inzh.; PORTER, L.G., inzh.; PRYADILOV, A.N., inzh.; SLUTSKIY, L.B., inzh.; FEDOSOV, I.V., inzh.; FRENKEL', B.A., inzh.; TSIMBLER, Yu.A., inzh.; SHUL'GIN, V.Kh., inzh.; ESKIN, M.G., kand. tekhn. nauk; VOROB'YEV, D.T., inzh. [deceased]; SINEL'NIKOV, A.V., kand. tekhn. nauk; SHENDLER, Yu.I., kand. tekhn. nauk, red.; NESMELOV, S.V., inzh., zam. glav. red.; NOVIKOVA, M.M., ved. red.; RASTOVA, G.V., ved. red.; SOLGANIK, G.Ya., ved. red.; VORONOVA, V.V., tekhn. red.

[Automation and apparatus for controlling and regulating production processes in the petroleum and petroleum chemical industries] Avtomatizatsiia, pribory kontroliia i regulirovaniia proizvodstvennykh protsessov v neftianoi i neftekhimicheskoi promyshlennosti. Moskva, Gostoptekhizdat. Book 3. [Control and automation of the processes of well drilling, recovery, transportation, and storage of oil and gas] Kontrol' i avtomatizatsiia protsessov bureniia skvazhin, dobychi, transporta i khraneniia nefi i gaza. 1963. 551 p. (Automation) (MIRA 16:7)

(Petroleum production--Equipment and supplies)

Minin, A.A.

2  
 27  
 4E4j  
 4E2C  
 4E2

2932. Colorimetric determination of titanium with diantipyryl-methane. / A. A. Minin. *Uch. Zap. MGOU. ONI. 1956, 6-10, 177-181; Ref. Zhur. Khim., 1956, Abstr. No. 75,277* — Diantipyryl-methane (I) forms with Ti in a. a. J medium a complex, which in dil. soln. is yellow, and in conc. soln.

methane (I) forms with TI in a J medium a complex, which in dil. soln. is yellow, and in conc. soln. is orange. To a HCl or H<sub>2</sub>SO<sub>4</sub> soln. of TI add 0.01 g of ascorbic acid (or more if there is a considerable content of Fe), a 5% soln. of CuSO<sub>4</sub> (two drops), and 8 to 10 ml of a soln. of I in N HCl. Dilute to 25 ml with conc. HCl (acidity 5 to 6 N) and measure the light absorption with a blue filter. Beer's law is obeyed for 5-30 µg of TI. Water is used for the comparison. No interference is caused by V, Co, Zn, Cd, Hg, Al, alkali metals, alkaline earths, F<sup>-</sup> or PO<sub>4</sub><sup>3-</sup>. The sensitivity of the method is 10 times greater than that of the H<sub>2</sub>O<sub>2</sub> method.

C. D. KOPKIN

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SOV/81-59-9-30750

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5.2620

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 9, p 98 (USSR)

AUTHOR: Minin, A.A.TITLE: Complex Compounds of Titanium With Some Antipyrine DerivativesPERIODICAL: Uch. zap. Permsk. un-t, 1958, Vol 15, Nr 4, pp 95 - 110

ABSTRACT: The methods of obtaining and some properties are described of the complex compounds of Ti with diantipyrylmethane<sup>1</sup>(R<sup>1</sup>), diantipyrylpropylmethane (R<sup>2</sup>), diantipyrylisobutylmethane (R<sup>3</sup>), diantipyrylphenylmethane (R<sup>4</sup>) and diantipyryl-o-oxyphenylmethane (R<sup>5</sup>). When an alcohol solution containing TiCl<sub>4</sub> and R<sup>1</sup> and saturated with HCl is let to settle for several days, R<sup>1</sup>H<sub>2</sub>[TiCl<sub>6</sub>] (I) crystals are separated. It was not possible to obtain analogous compounds with Br and I due to their low stability. The interaction of NH<sub>4</sub>SCN, R and TiCl<sub>4</sub> in water-alcohol solutions produced R<sup>1</sup>H[TiO(SCN)<sub>3</sub>] (II), R<sup>2</sup>H[TiO(SCN)<sub>3</sub>] (III), R<sup>3</sup>H[TiO(SCN)<sub>3</sub>] (IV), and R<sup>4</sup>H[TiO(SCN)<sub>3</sub>] (V). At the interaction of the same components in CHCl<sub>3</sub> the following substances were separated: (R<sup>2</sup>)<sub>2</sub>H<sub>2</sub>[Ti(SCN)<sub>6</sub>] (VI), (R<sup>3</sup>)<sub>2</sub>H<sub>2</sub>[Ti(SCN)<sub>6</sub>] (VII), (R<sup>4</sup>)<sub>2</sub>H<sub>2</sub>[Ti(SCN)<sub>6</sub>] (VIII) and R<sup>1</sup>H<sub>2</sub>[TiO(SCN)<sub>4</sub>] (IX). The interaction of TiCl<sub>4</sub> with R<sup>5</sup> in alcohol

Card 1/2



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Complex Compounds of Titanium With Some Antipyrine Derivatives SOV/81-59-9-30750

solutions containing HCl, HBr, HI and  $\text{NH}_4\text{SCN}$  produced:  $(R^5)_2\text{TiCl}_2$  (X),  $(R^5)_2\text{TiBr}_2$  (XI),  $(R^5)_2\text{TiI}_2$  (XII),  $(R^5)_2\text{Ti}(\text{SCN})_2$  (XIII), respectively. The compounds obtained are colored: I, VI and VII - red, II - orange-yellow, III, IV, V - yellow, VIII - dark crimson, IX - crimson-red, X, XI, XII and XIII - orange. I easily hydrolyzes at contact with water, II, III, IV, V, VI and VII are insoluble in water, xylene,  $\text{CCl}_4$ ,  $\text{CHCl}_3$ , soluble in  $\text{C}_6\text{H}_5\text{NO}_2$  and  $(\text{CH}_3)_2\text{CO}$ . Compounds X, XI, XII and XIII are poorly soluble in water, insoluble in  $(\text{C}_2\text{H}_5)_2\text{O}$  and  $\text{C}_6\text{H}_6$ , well soluble in  $\text{C}_2\text{H}_5\text{OH}$ ,  $(\text{CH}_3)_2\text{CO}$ ,  $\text{C}_6\text{H}_5\text{NO}_2$ . The melting points (with partial decomposition) are: VI 189, VII 210, VIII 224, X and XI > 250, XIII 225°C. IV and V decompose without melting at 185 and 240°C, respectively. ✓

V. Shmidt

Card 2/2

MININ, A. A., Cand Chem Sci -- (diss) "Complex compounds of titanium with some derivatives of antipyridine, and the possibility of their use in analytical chemistry." Perm', 1960. 14 pp including cover; (Ministry of Higher and Secondary Specialist Education RSFSR, Perm' State Univ im A. M. Gor'kiy, Chemistry Faculty); 180 copies; price not given; (KL, 22-60, 132)

S/032/60/026/012/005/036  
B020/B056

AUTHORS: Zhivopistsev, V. P., Minin, A. A.

TITLE: Separation and Successive Determination of Iron, Titanium,  
and Aluminum by Means of Diantipyrylmethane

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 12, pp. 1346-1347

TEXT: Diantipyrylmethane in acid solution gives difficultly soluble or colored compounds with a number of elements in the presence of thio-cyanogen- and halide-ions. The yellow compound of trivalent iron with this reagent in a strong HCl solution is extracted with chloroform, whereas titanium and aluminum remain in the aqueous solution. These elements may be isolated by the introduction of ammonium thiocyanate. Iron and titanium may, according to their quantity, be determined gravimetrically or colorimetrically. The course of the analysis is exactly described. By the colorimetric method suggested, Fe and Ti may be determined in the presence of fluorides, phosphates, and small quantities of silicic acid, in which case the latter need not be removed when determining only iron and titanium in titanium magnetites, concentrates, and alloys. The accuracy of titanium

Card 1/2

Separation and Successive Determination of  
Iron, Titanium, and Aluminum by Means of  
Diantiprylmethane

S/032/60/026/012/005/036  
B020/B056

determination is 1-2  $\mu$ /ml solution; thus the accuracy of the method corresponds to that carried out with chromotropic acid. Buffering of the solutions is not necessary; in this way samples with an Fe and Ti content of some hundredth or tenth percent may be analyzed. The method was tested on standard samples of titanium concentrates, bauxites, alumina, and refractories.

ASSOCIATION: Permskiy gosudarstvennyy universitet (Perm' State University)

Card 2/2

S/081/62/000/013/008/054  
B158/B144

AUTHORS: Minin, A. A., Yerofeyeva, S. A.

TITLE: Colorimetric determination of titanium using diantipyrylmethane

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1962, 144, abstract -  
13D83 (Uch. zap. Permsk. un-ta, v. 19, no. 1, 1961, 97-102)

TEXT: Some properties of a color compound formed by reaction of Ti(4+) with diantipyrylmethane (I) in aqueous hydrochloride solutions were studied. Light-absorption spectra of solutions of the complex Ti(4+) with I do not alter in the solutions at a HCl concentration in the range 0.5-4 N. Beer's law is observed for solutions containing 0.2-0.3 g/ml

TiO<sub>2</sub>. The molar coefficient of light absorption of the complex at 385 mμ is  $1.5 \cdot 10^4$ . Using the isomolar series method and the method of equilibrium displacement, it was established that Ti(4+) and I enter the composition of the complex at a ratio of 1:3. [Abstracter's note: Complete translation.]

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Design of a standard unit for the finishing of products in the  
electrostatic field. Der. prom. 15 no.1:19-20 Ja '66.

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Peredovye opty truda stakhanovtsev fanernoĭ promyshlennosti (Progressive work experience of Stakhanovites in the plywood industry). Minsk, Gos. izd. BSSR, 1952, 77 p.

SO: Monthly List of Russian Acquisitions, Vol 6, No. 3, June 1953



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Veneers and Veneering

Ways for economizing plywood raw material in peeling off veneer sheets. Der. i lesokhim. prom. 2, No. 4, 1953.

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[Modern methods of drying wood] Sovremennye metody sushki drevesiny.  
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(Lumber--Drying)

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SO: Knizhnaya letopis', No. 16, 1956